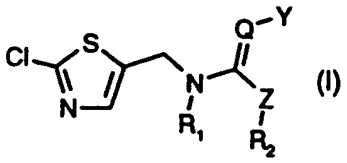
What is claimed is:

1. A process for the preparation of a compound of the formula



(I)

and, where applicable, its E/Z-isomers, mixtures of E/Z-isomers and/or tautomers, in each case in free form or in salt form, wherein

Q is CH or N,

Y is NO_2 or CN,

Z is CHR_3, O, NR_3 or S,

R_1 and R_2 are either each independently of the other hydrogen or unsubstituted or R_4-substituted C_1-C_8alkyl, or together form an alkylene bridge having two or three carbon atoms, and said alkylene bridge may additionally contain a hetero atom selected from the group consisting of NR_5, O and S,

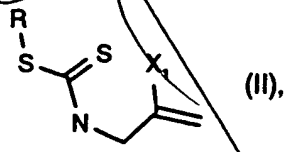
R_3 is H or unsubstituted or R_4-substituted C_1-C_{12}alkyl,

R_4 is unsubstituted or substituted aryl or heteroaryl, and

R_5 is H or C_1-C_{12}alkyl;

which comprises

a) reacting a compound of the formula



(II),

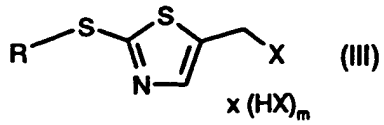
and, where applicable, its E/Z-isomers, mixtures of E/Z-isomers and/or tautomers, in each case in free form or in salt form, wherein

R is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or -SR_6; and

R_6 is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl,

X_1 is a leaving group;

with a halogenating agent, in the presence of a base, to form a compound of the formula



(III)

x $(HX)_m$

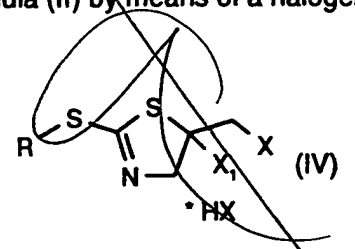
or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein

R is as defined for formula (II);

m is 0 or 1; and

X is halogen; or

b) converting a compound of formula (II) by means of a halogenating agent into a compound of the formula

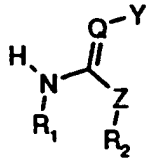


(IV)

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein R, X and X_1 are as defined for formulae (II) and (III); optionally

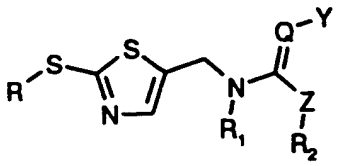
c) converting a compound of formula (IV), in the absence or in the presence of a base, preferably in the presence of a base, into a compound of formula (III);

d) converting a compound of formula (III) by reacting with a compound of the formula



(V),

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, in each case in free form or in salt form, wherein R_1, R_2, Y, Z and Q are as defined for the compound of formula (I), into a compound of the formula



(VI),

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, in each case in free form or in salt form, and wherein R_1, R_2, Y, Z and Q are as defined above for the compound of formula (I) and R is as defined above for the compound of formula (II); *or*

e) converting a compound of formula (IV) by reaction with a compound of formula (V) into a compound of formula (VI); and

f) converting a compound of formula (VI) by means of a chlorinating agent into a compound of formula (I);

and in each case, if desired, converting a compound of formula (I) obtainable in accordance with the process or by another method, or an E/Z-isomer or tautomer thereof, in each case in free form or in salt form, into a different compound of formula (I) or an E/Z-isomer or tautomer thereof, in each case in free form or in salt form, separating a mixture of E/Z-isomers obtainable in accordance with the process and isolating the desired isomer, and/or converting a free compound of formula (I) obtainable in accordance with the process or by another method, or an E/Z-isomer or tautomer thereof, into a salt or converting a salt, obtainable in accordance with the process or by another method, of a compound of formula (I) or of an E/Z-isomer or tautomer thereof into the free compound of formula (I) or an E/Z-isomer or tautomer thereof or into a different salt.

2. A process according to claim 1, wherein in the compound of formula (I)
R_1 and R_2 in the compounds of formulae (I), (V) and (VI) are either each independently of the other hydrogen or C_1-C_4alkyl, or together form a alkylene bridge containing 2 or 3 carbon atoms, that may additionally contain a hetero atom selected from the group consisting of O and S, or may contain the group NR_5, and
R_5 is H or C_1-C_4alkyl.

3. A process according to claim 1, wherein
R in the compounds of the formulae (II), (III), (IV) and (VI) is unsubstituted or substituted C_1-C_{12}alkyl; unsubstituted or substituted aryl-C_1-C_4alkyl; unsubstituted or halo-substituted heterocycyl-C_1-C_4alkyl, aryl-C_2-C_4alkenyl or heterocycyl-C_2-C_4alkenyl; unsubstituted or halo-

substituted C_2-C_4alkenyl, C_2-C_4alkynyl, aryl-C_2-C_4alkynyl, heterocycyl-C_2-C_4alkynyl or C_4-C_8cycloalkyl; unsubstituted or halo-, C_1-C_4alkyl-, HO-C_1-C_4alkyl- or HS-C_1-C_4alkyl-substituted aryl; unsubstituted or halo- or C_1-C_4alkyl-substituted heterocycyl; -CH_2-COO-C_1-C_8alkyl, -CH_2-CO-C_1-C_8alkyl, SR_6, -$(CH_2)_n$-SR_6 or -CH_2-COO-M, wherein M is hydrogen or a cation; and

n is from 1 to 8.

4. A process according to claim 1, wherein

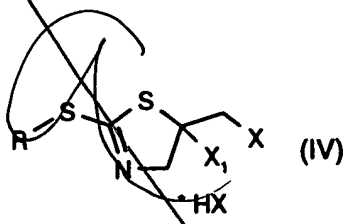
R in the compounds of formulae (II), (III), (IV) and (VI) is SR_6 or -$(CH_2)_n$-SR_6 and

R_6 is C_1-C_8alkyl, aryl-C_1-C_4alkyl, arylthio-C_1-C_4alkyl, heterocycyl-C_1-C_4alkyl, heterocycyl-thio-C_1-C_4alkyl, C_2-C_4alkenyl, aryl-C_2-C_4alkenyl, heterocycyl-C_2-C_4alkenyl, C_2-C_4alkynyl, aryl-C_2-C_4alkynyl, heterocycyl-C_2-C_4alkynyl, cyclohexyl, aryl or heterocycyl; and

n is 1 or 2.

5. A process according to claim 1, wherein in the compounds of formulae (III) and (IV) X is chlorine or bromine.

6. A compound of the formula



(IV)

wherein

R is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or -SR_6; and

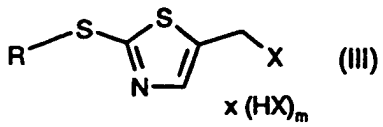
R_6 is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl;

X is halogen; and

X_1 is a leaving group;

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof.

7. A process for the preparation of a compound of the formula



(III)

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein

R is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or -SR_6; and

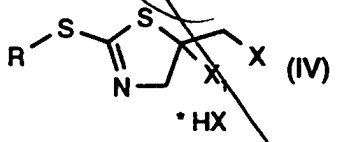
R_6 is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl,

m is 0 or 1; and

X is halogen;

which comprises reacting a compound of the formula (II), as defined in claim 1, with a halogenating agent, in the presence of a base.

8. A process for the preparation of a compound of the formula



(IV)

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein

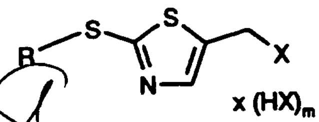
R is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or -SR_6; and

R_6 is unsubstituted or substituted C_1-C_{12}alkyl, unsubstituted or substituted C_2-C_4alkenyl, unsubstituted or substituted C_2-C_4alkynyl, unsubstituted or substituted C_3-C_6cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl,

X is halogen;

which comprises reacting a compound of the formula (II), as defined in claim 1, with a halogenating agent.

9. A process for the preparation of a compound of the formula



(III)

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein R, X and m are as defined in claim 7 for formula (III), which comprises treating a compound of the formula (IV), as defined in claim 6 with a base.